

REMARKS

Claims 1 - 12 and 14 - 19 are pending in the present application. Claim 13 is canceled by the present amendment, and claims 16 - 19 are newly added. Applicant is requesting reconsideration of the present application.

On page 2 of the Office Action, the drawings are objected to because FIGS. 1a and 1b should be labeled "PRIOR ART." Applicant is amending FIGS. 1a and 1b to include the label "PRIOR ART", as suggested by the Office Action. Withdrawal of the objection to the drawings is respectfully solicited.

On page 2 of the Office Action, several claims are objected to because of informalities. Applicant is amending the claims, and believes that all of the objections have been addressed. Withdrawal of the objection to the claims is respectfully solicited.

On page 2 of the Office Action, claims 1 - 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant is amending the claims, and believes that all of the section 112 rejections have been addressed. Applicant respectfully requests reconsideration and withdrawal of the section 112 rejections.

On page 3 of the Office Action, claims 1 - 6 and 11 - 13 are rejected under 35 U.S.C. 102(a) as being anticipated by U.K. Patent Application Publication No. 2 359 684 A to Glingener et al. (hereinafter "the Glingener et al. publication"). Of this set of rejected claims, two are independent, namely claims 1 and 11. Applicant is amending claims 1 and 11 to clarify a feature that is neither disclosed nor suggested by the Glingener et al. publication.

Claim 1 is a method claim. The method includes combining a first optical signal and a second optical signal to create an optical time domain reflectometer (OTDR) test signal.

Applicant respectfully submits that OTDR testing is well known in the art of optical testing. In an OTDR test, an OTDR test signal is applied to an optical system, and a reflection of the applied

OTDR test signal is evaluated to determine a characteristic of the optical system. A person skilled in the art of OTDR testing would therefore also understand that the OTDR test signal is a short-duration optical pulse.

The Glingener et al. publication, with reference to FIG. 1, discloses a system that includes a plurality of laser modulator devices LM1 – LMn that produce signals WS1 to WSn that are combined by a wavelength division multiplexer WDM to form a wavelength multiplexed signal WMS (page 5, lines 19 – 30). The system also includes a plurality of amplitude-modulated pump signals PPS1 – PPSn that effect an additional cross-phase modulation (page 5, lines 31 – 35). The Glingener et al. publication explains that the system utilizes self-phase modulation (page 3, lines 7 – 9) and cross-phase modulation (page 3, lines 20 – 21) to broaden a frequency spectrum of a signal.

Applicant submits that it is well known in the art that a pump laser is a source of a continuous wave that emits light with a Raman wavelength distance with respect to a corresponding signal, for effecting an amplification of the corresponding signal. As such, a pump would interfere with an OTDR test signal because a reflection of pump light would superimpose on the reflection of the OTDR test signal. More particularly, the power of the reflected pump signal would be far greater than the power of the reflected OTDR test signal, thus interfering with the detection of the reflected OTDR test signal. As such, amplitude-modulated pump signals PPS1 – PPSn cannot be used in a system that produces an OTDR test signal.

Additionally, in general, self-modulation and cross-phase modulation each leads to a distortion of an optical signal. As mentioned above, in an OTDR test, it is very important to generate short pulses, as the width of the pulses relates directly to a spatial accuracy of OTDR results. However, self-phase modulation and cross phase modulation cause a broadening of pulses and would thereby deteriorate the OTDR results. Consequently, self-modulation and cross-phase modulation are undesirable in an OTDR test signal.

The Glingener et al. patent does not mention OTDR. Nevertheless, whereas the system in the Glingener et al. publication includes pumps, and utilizes self-phase modulation and cross-phase

modulation to broaden a frequency spectrum of a signal, and whereas amplitude-modulated pump signals PPS1 – PPSn cannot be used in a system that produces an OTDR test signal, and self-modulation and cross-phase modulation are undesirable in an OTDR test signal, the system disclosed by the Glingener et al. publication is not suitable for creating an OTDR test signal. Accordingly, Applicant respectfully submits that the Glingener et al. patent neither discloses nor suggests combining a first optical signal and a second optical signal **to create an optical time domain reflectometer (OTDR) test signal**, as recited in claim 1. Accordingly, claim 1 is both novel and unobvious over the Glingener et al. publication.

Claim 11 includes a recital similar to that of claim 1, as described above. Accordingly, claim 11, for reasoning similar to that provided in support of claim 1, is also novel and unobvious over the Glingener et al. publication.

Claims 2 – 6 depend from claim 1, and claim 12 depends from claim 11. By virtue of these dependencies, claims 2 – 6 and 12 are also novel and unobvious over the Glingener et al. publication.

Claim 13 is canceled. Thus, the rejection of claim 13 is rendered moot.

Applicant respectfully requests reconsideration and withdrawal of the section 102(a) rejection of claims 1 – 6 and 11 – 13.

On page 4 of the Office Action, claims 7 – 10, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Glingener et al. publication. This set of rejected claims contains two independent claims, namely claims 10 and 15. Applicant is amending claims 10 and 15 to clarify a feature that is neither disclosed nor suggested by the Glingener et al. publication.

Claims 7 – 9 depend from claim 1. As explained above, claim 1 is novel and unobvious over the Glingener et al. publication. Claims 7 – 9, by virtue of their dependence on claim 1, are also novel and unobvious over the Glingener et al. publication.

Claim 10 includes a recital similar to that of claim 1, as described above. Accordingly, claim 10, for reasoning similar to that provided in support of claim 1, is also novel and unobvious over the Glingener et al. publication.

Claim 14 depends from claim 11. As explained above, claim 11 is novel and unobvious over the Glingener et al. publication. Claim 14, by virtue of its dependence on claim 11, is also novel and unobvious over the Glingener et al. publication.

Claim 15 includes a recital similar to that of claim 1, as described above. Accordingly, claim 15, for reasoning similar to that provided in support of claim 1, is also novel and unobvious over the Glingener et al. publication.

Applicant respectfully requests reconsideration and withdrawal of the section 103(a) rejection of claims 7 – 10, 14 and 15.

As mentioned above, Applicant is amending (a) several claims to address informalities, (b) several claims to address a rejection under 35 U.S.C. 112, and (c) claims 1, 10, 11 and 15 to clarify a feature that is neither disclosed nor suggested by the Glingener et al. publication. Additionally, Applicant is amending various claims for one or more of (a) correcting an indefinite recital, (b) ensuring an antecedent basis for terms, (c) improving form, (d) improving grammar, or (e) deleting recitals that do not appear to be necessary for patentability. None of the amendments is intended to narrow the scope of any term of any claim, and therefore, the doctrine of equivalents should be available for all of the terms of all of the claims.

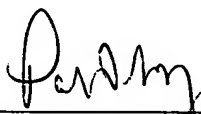
Applicant is adding claims 16 - 19 to even further provide the claim coverage that Applicant appears to deserve based on the prior art that was cited by the Examiner. A favorable consideration that also results in the allowance of claims 16 - 19 is earnestly solicited.

In view of the foregoing, Applicant respectfully submits that all claims presented in this application patentably distinguish over the prior art. Accordingly, Applicant respectfully requests favorable consideration and that this application be passed to allowance.

Respectfully submitted,

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Date



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IN THE DRAWINGS

Please replace drawing sheet 1/1 with the amended version included herewith.